

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 (currently amended). A method of aiding in a renal cell carcinoma prognosis, the method comprising:

(a) quantifying, by immunohistochemical staining or immunoassay, expressed human carbonic anhydrase IX (CAIX) protein, if any, present in one or more samples derived from a renal tumor and/or a metastatic lesion derived from a renal tumor of a human subject diagnosed with renal clear cell carcinoma to produce quantified CAIX expression data indicating the overall quantification percentage of the sample(s) positive for CAIX expression;

(b) correlating the quantified CAIX expression data with a probability of a renal cell carcinoma prognosis for the subject, wherein a quantification percentage of about 85% stratifies the prognosis for the subject with a quantification percentage lower than about 85% predicting a worse outcome for a subject with locally advanced renal clear cell cancer and poor survival for a subject with metastatic renal clear cell cancer.

2 (canceled).

3 (canceled).

4 (withdrawn). The method of claim 1, wherein the expressed CAIX comprises an mRNA that encodes a CAIX polypeptide.

5 (original). The method of claim 1, wherein the expressed CAIX are quantified by immunohistochemical staining.

6 (canceled).

7 (original). The method of claim 1, wherein the quantified CAIX expression data comprises a quantification percentage of more than 85%, which quantification percentage correlates with a better prognosis for the subject than a quantification percentage of 85% or less when the subject is diagnosed with metastatic renal cell carcinoma.

8 (original). The method of claim 1, wherein the quantified CAIX expression data comprises a quantification percentage of 85% or less, which quantification percentage correlates with a better prognosis for the subject than a quantification percentage of 85% or less when the subject is diagnosed with non-metastatic renal cell carcinoma of T stage ≥ 3 and Fuhrman grade ≥ 2 .

9 (original). The method of claim 1, wherein the quantified CAIX expression data comprises a quantification percentage of more than 85%, which quantification percentage further correlates with a likely positive response to interleukin-2 immunotherapy for the subject.

10 (original). The method of claim 1, wherein the quantified CAIX expression data comprises a quantification percentage of more than 85%, which quantification percentage further correlates with a likely positive response to one or more CAIX-targeted therapies for the subject.

11 (original). The method of claim 1, wherein the quantified CAIX expression data comprises a quantification percentage of 85% or less, which quantification percentage further correlates with a likely positive response to an adjuvant immunotherapy for the subject when the subject is diagnosed with non-metastatic renal cell carcinoma of T stage ≥ 3 and Fuhrman grade ≥ 2 .

12 (original). The method of claim 1, wherein the quantified CAIX expression data are in a computer-readable form.

13 (original). The method of claim 12, wherein (b) comprises operating a programmable computer that comprises at least one database and executing an algorithm that determines closeness-of-fit between the computer-readable quantified CAIX expression data and database

entries, which entries correspond to clinical and/or pathological data for a population of renal cell carcinoma patients to thereby correlate the quantified CAIX expression data with the probability of the renal cell carcinoma prognosis for the subject.

14 (original). A method of aiding in a renal clear cell carcinoma prognosis, the method comprising:

(a) quantifying, by immunohistochemical staining or immunoassay using antibodies immunoreactive with a protein of SEQ ID NO:2, expressed CAIX polypeptides, if any, present in one or more samples derived from a human subject diagnosed with renal clear cell carcinoma to produce quantified CAIX polypeptide expression data, wherein the samples are derived from a renal tumor and/or a metastatic lesion derived from a renal tumor, and the quantified CAIX polypeptide expression data indicates the overall quantification percentage of the sample(s) positive for expression of the CAIX polypeptide; and,

(b) correlating the quantified CAIX polypeptide expression data with a probability of a renal clear cell carcinoma prognosis, wherein a quantification percentage of about 85% stratifies the prognosis for the subject, wherein the prognosis for a subject having a sample quantification percentage below about 85% is worse.

15 (original). The method of claim 14, wherein the expressed CAIX polypeptides are quantified by immunohistochemical staining and the quantification percentage comprises a positive staining percentage.

16 (original). The method of claim 14, wherein a quantification percentage of more than 85% correlates with a better prognosis for the subject than a quantification percentage of 85% or less when the subject is diagnosed with metastatic renal clear cell carcinoma.

17 (original). The method of claim 14, wherein a quantification percentage of more than 85% correlates with a better prognosis for the subject than a quantification percentage of 85% or less when the subject is diagnosed with non-metastatic renal clear cell carcinoma of T stage ≥ 3 and

Fuhrman grade ≥ 2 .

18 (original). The method of claim 14, wherein a quantification percentage of more than 85% for a sample derived from the renal tumor correlates with a lower probability of metastasis than a quantification percentage of 85% or less for the sample derived from the renal tumor.

19 (original). The method of claim 14, wherein a quantification percentage of more than 85% further correlates with a likely positive response to interleukin-2 immunotherapy for the subject.

20 (original). The method of claim 14, wherein a quantification percentage of more than 85% further correlates with a likely positive response to one or more CAIX-targeted therapies for the subject.

21 (original). The method of claim 14, wherein a quantification percentage of 85% or less further correlates with a likely positive response to an adjuvant immunotherapy for the subject when the subject is diagnosed with non-metastatic renal cell carcinoma of T stage ≥ 3 and Fuhrman grade ≥ 2 .

22 (original). The method of claim 14, wherein the quantified CAIX expression data are in a computer-readable form.

23 (original). The method of claim 22, wherein (b) comprises operating a programmable computer that comprises at least one database and executing an algorithm that determines closeness-of-fit between the computer-readable quantified CAIX expression data and database entries, which entries correspond to clinical and/or pathological data for a population of renal clear cell carcinoma patients to thereby correlate the quantified CAIX expression data with the probability of the renal clear cell carcinoma prognosis for the subject.

24 (canceled)

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25 (canceled).

26 (new). The method of claim 1, wherein the quantifying by immunohistochemistry uses antibodies immunoreactive with a protein of SEQ ID NO:2 to quantify the expressed CAIX protein.